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TITLE: METHOD FOR TREATING MEDICAL POLYMER
MOLDING BY
IRRADIATION WITH ELECTRON BEAM

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ABSTRACT:

PURPOSE: To polymerize a residual monomer in a polymer

molding and simultaneously sterilize the molding safely by irradiating it with electron beams to give it a specified amt. of energy.

CONSTITUTION: A medical polymer molding which is produced from a polymer material, such as a polystyrene, containing an unreacted monomer (e.g., an artificial organ, a catheter, a sewing thread, or a blood bag) or a package of the molding is irradiated with electron beams in such a way that the molding or package is given an energy of 2.5-30Mrad. Thus, the unreacted monomer polymerizes to increase the mechanical strengths of the molding, enabling the production, from a cheap polymer (e.g., a PS), of it having qualities comparable with those of one produced from a high-quality polymer (e.g., a PP). Simultaneously, the molding is sterilized without using a sterilizing gas, eliminating fear of carcinogenicity due to the remaining gas.

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